

AMENDMENTS TO THE SPECIFICATION

Please amend the specification by inserting the following two new paragraphs prior line 10 of page 7.

Figure 5 is a flowchart illustrating steps of a process of translating instructions in accordance with an embodiment of the present invention.

Figure 6 is a flowchart illustrating steps of a process of translating instructions in accordance with an embodiment of the present invention.

Please amend the specification by inserting the following 9 new paragraphs after line 6 of page 14.

Figure 5 is a flowchart illustrating steps of a process 500 of translating instructions in accordance with an embodiment of the present invention. Step 510 is beginning execution of a first sequence of target instructions by committing state of the target processor and storing memory stores generated by previously-executed sequences of instructions at a point in the execution of instructions at which state of the target processor is known.

Step 520 is beginning execution of a speculative sequence of host instructions following a branch from the first sequence of target instructions by immediately committing state and storing memory stores.

Step 530 is releasing a lock if the sequence of host instructions is running in a locked condition. The lock is released immediately after committing state of the target processor and storing memory stores generated by previously-executed translation sequences in step 520.

Step 540 is attempting to execute the speculative sequence of host instructions until another point in the execution of target instructions at which state of the target processor is known.

Step 550 is rolling back to last committed state of the target processor and discarding memory stores generated by the speculative sequence of host instructions if execution fails. Process 500 then exits

Step 560 is beginning execution of a next sequence of target instructions if execution succeeds. Process 500 then exits.

Figure 6 is a flowchart illustrating steps of a process 600 of translating instructions in accordance with an embodiment of the present invention. Step 610 is a determination if sequence of instructions includes a locking operation.

If the sequence of instructions does include a locking operation, a commit operation is placed at the beginning of the sequence of instructions including the locking operation, in step 620. Process 600 then exits.

If a sequence of instructions does not include a locking operation, a commit operation is placed at the end of the sequence of instructions not including the locking operation, in step 630. Process 600 then exits.